INCH-POUND

MIL-T-27/291B
13 March 1991
SUPERSEDING
MIL-T-27/291A
14 JUNE 1982

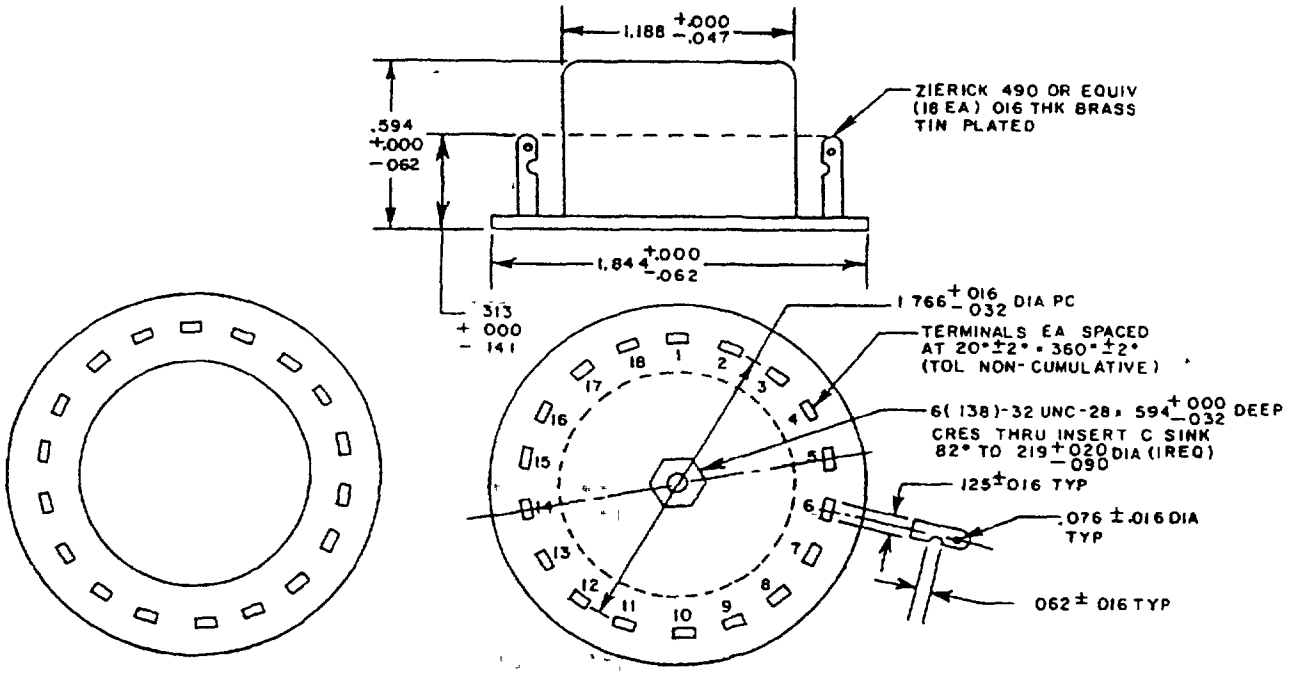
MILITARY SPECIFICATION SHEET

TRANSFORMERS, POWER, STEP-DOWN, TF5S03ZZ

Ⓑ Inactive for new design after the date of this specification.

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation: MIL-T-27.

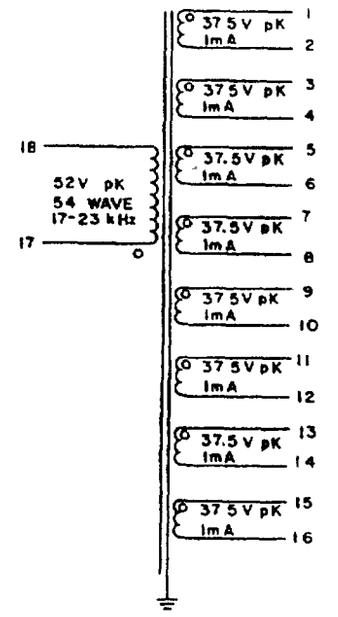


TOP VIEW

BOTTOM VIEW

FIGURE 1. Dimensions and configurations.

Ⓑ denotes changes



ALTITUDE: 10,000 FT MAX
WORKING VOLTAGE:
PRI: (17-18)52 V pK
SEC 37.5V pK

CIRCUIT DIAGRAM AND MARKING

Inches	mm
.000	0.00
.016	0.41
.020	0.51
.032	0.81
.062	1.57
.076	1.93
.090	2.29
.125	3.18
.138	3.51
.141	3.59
.219	5.56
.313	7.95
.534	13.56
.594	15.09
1.188	30.18
1.766	44.86
1.844	46.84

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Marking shall be on the bottom of transformer.

FIGURE 1. Dimensions and configurations - Continued.

REQUIREMENTS: (When numbers in parentheses, i.e., (1-2) are used, they indicate the winding and the extreme terminals of the winding.)

Electrical ratings:

Primary voltage (17-18): 52 volts pk, 17-23 kHz square wave.

Primary current (17-18): 6 mA maximum.

Secondary voltage (1-2), (3-4), (5-6), (7-8), (9-10), (11-12), (13-14), (15-16): 37.5 volts pk each winding.

Secondary current (1-2), (3-4), (5-6), (7-8), (9-10), (11-12), (13-14), (15-16): 1 mA rms each winding.

Working voltage:

(17-18): 52 volts pk.

(1-2), (3-4), (5-6), (7-8), (9-10), (11-12), (13-14), (15-16): 37.5 volts pk.

Design and construction:

Dimensions and configuration: See figure 1.

Duty cycle: Continuous.

Case: Encapsulated.

Material Epoxy.

Terminals: Brass, solder type lugs.

Terminal height: 0.313 +.000, -.141 inch

Weight: 56.7 grams, maximum.

Operating temperature range. -40°C to +130°C.

Terminal strength: MIL-STD-202, method 211, test condition A, 2.0 pounds.

Dielectric withstanding voltage (at sea level):

300 V rms (17-18) to all secondaries and ground.
100 V rms, between secondaries and ground.

Electrical characteristics:

No load: With 52 volts pk, 17-23 kHz across (17-18), the voltage across (1-2), (3-4), (5-6), (7-8), (9-10), (11-12), (13-14), (15-16) shall be 37.5 volts pk ±2 percent.

Rated load: With 52 volts pk, 17-23 kHz across (17-18), the voltage across (1-2), (3-4), (5-6), (7-8), (9-10), (11-12), (13-14), (15-16) shall be 37.5 volts pk ± 2 percent.

DC resistance: (17-18) .67 ohm maximum. (1-2), (3-4), (5-6), (7-8), (9-10), (11-12), (13-14), (15-16) 2.81 ohms maximum each.

Polarity: Additive, with terminals 18 and 1, 2 and 3, 4 and 5, 6 and 7, 8 and 9; 10 and 11, 12 and 13, and 14 and 15, connected.

Temperature rise: 50°C with 52 volts pk, 17 kHz across (17-18) at an ambient temperature of 80°C.

Vibration, high frequency MIL-STD-202, method 204, test condition A.

Shock (specified pulse). MIL-STD-202, method 213, test condition H.

Ⓑ Quality assurance provisions:

Qualification inspection: Not applicable.

Quality conformance inspection: Groups A and B tests of MIL-T-27 shall be applicable.

Marking location: See figure 1

Part number: M27/291-01.

CONCLUDING MATERIAL

Custodians:
Army - ER
Navy - EC
Air Force - 85

Review activities:
Army - MI
Navy - OS, SH
Air Force - 17, 99
DLA - ES

User activities
Army - AR
Navy - AS, MC
Air Force - 19

Preparing activity
Army - ER

Agent
DLA - ES

(Project 5950-0753-48)